

**AMENDMENTS TO THE DRAWINGS**

The attached sheets of drawings, which include FIGS. 2B, 2C, 3B, and 3C, replace the original sheets including FIGS. 2B, 2C, 3B, and 3C.

Attachments: Replacement Sheet (FIGS. 2B, 2C, 3B, and 3C)

**REMARKS**

Claims 1-20 are pending in this application. Claim 1 is an independent claim. Claims 1-5, 9-11, 14, 19, and 20 are amended. Claims 12 and 13 are cancelled without any intent of prejudice to or disclaimer of the subject matter contained therein. Reconsideration and allowance of the present application are respectfully requested.

**Objections to the Drawings**

The Examiner objects to the drawings because the following reference characters are not mentioned in the Description: 24, in FIGS. 2B, 2C, 3B, and 3C. Applicant has revised these figures to remove reference number 24 from the drawings. Accordingly, Applicant respectfully requests that the Examiner remove this objection to the drawings.

**Rejections under 35 U.S.C. §112, Second Paragraph**

Claims 9 and 10 stand rejected under 35 USC §112, second paragraph, as being indefinite. This rejection is respectfully traversed.

With regard to claims 9 and 10, the Examiner indicates that the claims are drawn to a method, however the claims are not clearly set forth using step by step method operations written in gerund form. Applicant amends claims 9 and 10 to clearly identify method steps, each method step beginning with a gerund.

Applicant believes these claims are definite as they particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Therefore, Applicant respectfully requests that the rejections of this claims under 35 U.S.C. §112 be withdrawn.

**Rejections under 35 U.S.C. §102 - Neveling**

Claims 1-5, 8 and 11-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. 2,002,749 ("Neveling"). This rejection is respectfully traversed.

With regard to independent claim 1, the Examiner asserts that FIGS. 1-4 of Neveling teach all of the claim limitations. Applicant asserts that Neveling does not teach "a number of cutter heads with a different support ring diameter, a first cutter head of said number of cutter heads having a support ring diameter configured for a relatively hard bed material, such as rock, and a second cutter head of said number of cutter heads having a support ring diameter configured for a relatively soft bed material, such as sand, said number of cutter heads being alternatively mountable via the same hub on the drive shaft," as recited in claim 1. As shown in FIG. 2 of Neveling, Neveling discloses two series of cutter blades 15<sup>a</sup> / 15<sup>b</sup>, as described in page 2, column 1, line 73 through column 2, line 7. Specifically, Neveling teaches an outer section of cutter blades 15<sup>a</sup> and an inner section of cutter blades 15<sup>b</sup>, each section of blades feeding passage 32 and 33, respectively. Applicant asserts that Neveling does not teach a "first cutter head . . . configured for a relatively hard bed material" and "a second cutter head . . . configured for a relatively soft bed material," as recited in claim 1, as both series of cutter blades 15<sup>a</sup> / 15<sup>b</sup> are instead designed to cut through one common type of material, independent of whether the material is hard or soft.

Additionally, Applicant asserts that Neveling does not teach a "number of cutter heads being alternatively mountable via the same hub on the drive shaft," as recited in claim 1. Applicant asserts that Neveling only teaches two separate sections of cutter blades 15<sup>a</sup>/15<sup>b</sup>, each section of blades operating in unison to feed passages 32/33 to

collect a common dredging material. Applicant asserts that Neveling does not teach cutter heads that are “alternatively mountable,” as recited in claim 1, as each section of blades 15<sup>a</sup>/15<sup>b</sup> are required to operate at the same time, independent of whether the material is hard or soft. Therefore, for at least these reasons Applicant asserts that Neveling does not teach “a number of cutter heads with a different support ring diameter, a first cutter head of said number of cutter heads having a support ring diameter configured for a relatively hard bed material, such as rock, and a second cutter head of said number of cutter heads having a support ring diameter configured for a relatively soft bed material, such as sand, said number of cutter heads being alternatively mountable via the same hub on the drive shaft,” as recited in claim 1.

With regard to dependent claim 2, the Examiner asserts that Neveling discloses a device wherein a number of suction mouths 30<sup>a</sup>, 30<sup>e</sup> with a different entry section 30<sup>g</sup>, 30<sup>i</sup> can be connected to the suction pipe 25, wherein the entry section is determined by the nature of the dredging material to be recovered, as shown in FIG. 2.<sup>1</sup> Applicant asserts that Neveling does not teach “a number of suction mouths with a different entry section which are alternatively connectable to the suction pipe,” as recited in claim 2. Applicant asserts that Neveling only teaches different entry sections 30<sup>g</sup> and 30<sup>i</sup> designed to operate in unison with each other, but Neveling does not teach entry sections that are “alternatively connectable to the suction pipe,” as recited in claim 2. Applicant further asserts that Neveling does not teach “a first suction mouth . . . configured for a relatively hard bed material . . . a second suction mouth . . . configured for a relatively soft bed material,” as recited in claim 2. Applicant asserts that Neveling only teaches asserted “suction mouth” 30<sup>g</sup> for a outer section of cutter blades 15<sup>a</sup>, and another “suction mouth” 30<sup>i</sup> for an inner section of

---

<sup>1</sup> Page 3 of the current Office Action.

cutter blades 15<sup>b</sup> each suction mouth designed to operate at the same time to dredge a common material, independent of whether the material is hard or soft. Applicant asserts that because Neveling does not teach “alternatively connectable” suction pipe with a different suction mouth for hard and soft bed material, Applicant therefore asserts that Neveling does not teach “a number of suction mouths with a different entry section which are alternatively connectable to the suction pipe, a first suction mouth of said number of suction mouths being configured for a relatively hard bed material, such as rock, and a second suction mouth of said number of suction mouths being configured for a relatively soft bed material,” as recited in claim 2.

With regard to dependent claim 4, Applicant asserts that Neveling does not teach “a number of cutter shields being alternatively mountable on the cutter ladder,” as recited in claim 4. Applicant asserts that Neveling only teaches one asserted “cutter shield” 30<sup>c</sup>, such that Neveling does not teach a number of cutter shields otherwise “alternatively mountable,” as recited in claim 4. For at least this reason, Applicant asserts that Neveling does not teach all of the limitations of claim 4.

With regard to dependent claim 5, Applicant asserts that Neveling does not teach “the angle of opening of the truncated cone of the first cutter shield is greater than the angle of opening of the truncated cone of the second cutter shield,” as recited in claim 5. Applicant asserts, as argued in claim 4 above, that Neveling does not teach both a “first and second cutter shield,” and for at least this reason Neveling therefore does not teach an angle of opening of the truncated cone of a “first cutter shield” being greater than an angle of opening of the truncated cone of a “second cutter shield,” as recited in claim 5. For at least this reason, Applicant asserts that Neveling does not teach all of the claim limitations of claim 5.

With regard to dependent claim 9, Applicant asserts that Neveling does not teach “selecting a cutter head from the number of cutter heads as a function of the dredging material . . . wherein a cutter head with a smaller diameter is selected for a harder material,” as recited in claim 9. Applicant asserts that Neveling teaches two series of cutter blades, designed to operate in unison, independent of whether the material is hard or soft. Therefore, Applicant asserts that Neveling does not select blades “as a function of the dredging material,” as recited in claim 9. Applicant further asserts that because Neveling does not select between cutter heads, Neveling therefore also does not teach a “cutter head with a smaller diameter is selected for a harder material,” as recited in claim 9. For at least these reasons, Applicant asserts that Neveling does not teach all of the limitations of claim 9.

With regard to dependent claims 10, 11, and 14, Applicant asserts that these claims contain features similar to claims 9, 4, and 5, respectively, and therefore claims 10, 11, and 14 are patentable for at least the same reasons. Therefore, Applicant respectfully requests that this art ground of rejection of these claims under 35 U.S.C. §102 be withdrawn.

**Rejections under 35 U.S.C. §103 – Neveling in view of Volbeda**

Claims 6 and 15-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neveling in view of U.S. 4,327,507 (“Volbeda”). This rejection is respectfully traversed.

With regard to claims 6 and 15-20, the Examiner uses Volbeda to teach a device having a cutter head and nozzle for spraying a fluid under high pressure,

wherein the pressure is considered high enough to cut soil.<sup>2</sup> With regard to independent claim 1, Applicant asserts that Neveling does not teach or suggest all of the claim limitations for at least the reasons stated above. Applicant asserts that a review of Volbeda indicates that Volbeda does not remedy the deficiencies of Neveling. Specifically, Applicant asserts that neither Neveling, nor Volbeda, either singly or in combination with each other, teach or suggest "a number of cutter heads with a different support ring diameter, a first cutter head of said number of cutter heads having a support ring diameter configured for a relatively hard bed material, such as rock, and a second cutter head of said number of cutter heads having a support ring diameter configured for a relatively soft bed material, such as sand, said number of cutter heads being alternatively mountable via the same hub on the drive shaft," as recited in claim 1.

For at least the reasons stated above, Applicant asserts that claim 1 is patentable. Due at least to the dependence of claims 6 and 15-20 on claim 1, Applicant also asserts that these claims are patentable. Therefore, Applicant respectfully requests that this art ground of rejection of these claims under 35 U.S.C. §103 be withdrawn.

**Rejections under 35 U.S.C. §103 – Neveling in view of Huff**

Claims 6 and 15-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neveling in view of U.S. 2,678,203 ("Huff"). This rejection is respectfully traversed.

With regard to claims 6 and 15-20, the Examiner uses Huff to teach a device for dislodging and recording material having nozzles for spraying a fluid under high

---

<sup>2</sup> See Page 5 of the June 30, 2008 Office Action.

pressure.<sup>3</sup> With regard to independent claim 1, Applicant asserts that Neveling does not teach or suggest all of the claim limitations for at least the reasons stated above. Applicant asserts that a review of Huff indicates that Huff does not remedy the deficiencies of Neveling. Specifically, Applicant asserts that neither Neveling, nor Huff, either singly or in combination with each other, teach or suggest "a number of cutter heads with a different support ring diameter, a first cutter head of said number of cutter heads having a support ring diameter configured for a relatively hard bed material, such as rock, and a second cutter head of said number of cutter heads having a support ring diameter configured for a relatively soft bed material, such as sand, said number of cutter heads being alternatively mountable via the same hub on the drive shaft," as recited in claim 1.

For at least the reasons stated above, Applicant asserts that claim 1 is patentable. Due at least to the dependence of claims 6 and 15-20 on claim 1, Applicant also asserts that these claims are patentable. Therefore, Applicant respectfully requests that this art ground of rejection of these claims under 35 U.S.C. §103 be withdrawn.

#### **Rejections under 35 U.S.C. §103 – Neveling**

Claims 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Neveling. This rejection is respectfully traversed.

With regard to independent claim 1, Applicant asserts that Neveling does not teach or suggest all of the claim limitations for at least the reasons stated above, such that claim 1 is patentable. Due at least to the dependence of claims 9 and 10 on claim 1, Applicant asserts that claims 9 and 10 are also patentable. Therefore, Applicant

---

<sup>3</sup> See Page 6 of the June 30, 2008 Office Action.



respectfully requests that this art ground of rejection of these claims under 35 U.S.C. §103 be withdrawn.

**CONCLUSION**


In view of the above remarks and amendments, Applicant respectfully submits that each of the rejections has been addressed and overcome, placing the present application in condition for allowance. A notice to that effect is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to contact the undersigned.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By   
Donald J. Daley, Reg. No. 34,313

P.O. Box 8910  
Reston, Virginia 20195  
(703) 668-8000

DJD/CES:eab